IN THE CLAIMS:

1. (currently amended) A method for operating a radiation source, said method comprising:

providing ~~a~~ at least one of a line radiation source and a two-dimensional radiation source;

providing a detector; and

operating the radiation source and the detector such that the detector receives a substantially homogenous noise distribution.

2. (original) A method in accordance with Claim 1 further comprising operating the radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by the detector.

3. (canceled)

4. (original) A method in accordance with Claim 1 further comprising installing a filter between the radiation source and an object of interest such that an x-ray flux delivered to a plurality of regions in a field of view is approximately homogeneous.

5. (original) A method in accordance with Claim 1 further comprising modulating a radiation source current such that the radiation source current near an edge of the radiation source is greater than the radiation current at a center of the radiation source.

6. (original) A method in accordance with Claim 1 further comprising modulating a dwell time of an electron beam emitted from the radiation source such that a dwell time at an X-ray spot near an edge of a field of view is greater than the dwell time at an X-ray spot near a center of the field of view.

7. (original) A method in accordance with Claim 1 further comprising modifying a sampling distance between a plurality of x-ray spots such that the spots near an edge of the radiation source are spaced closer than the spots near a center of the radiation source.

8. (currently amended) A method for operating a radiation source on a scanning imaging system, wherein said imaging system comprises a radiation source, a detector, and a filter between said radiation source and said detector, said method comprising:

operating the radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by the detector;

modulating the radiation source current such that the radiation source current near an edge of the radiation source is greater than the radiation source current at a center of the radiation source; and

modulating a dwell time of an electron beam emitted from the radiation source such that a dwell time at an X-ray spot near an edge of the field of view is greater than the dwell time at an x-ray spot near the center of the field of view.

9. (original) A method in accordance with Claim 8 wherein said operating the radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by the detector comprises operating at least one of a line radiation source and a two-dimensional radiation source.

10. (original) A method in accordance with Claim 8 further comprising modifying a sampling distance between a plurality of X-ray spots such that the spots near an edge of the radiation source are spaced closer than the spots near a center of the radiation source such that the detector receives a substantially homogenous noise distribution.

11. (currently amended) A computer operating a radiation source installed on a scanning imaging system, wherein said imaging system comprises ~~a~~ at least one of a line

radiation source and a two-dimensional radiation source and a detector, said computer programmed to operate the at least one of a line radiation source and a two-dimensional radiation source and the detector such that the detector receives a substantially homogenous noise distribution.

12. (canceled)

13. (original) A computer in accordance with Claim 11 further programmed to operate the radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by the detector.

14. (original) A computer in accordance with Claim 11 further programmed to operate the imaging system, wherein said imaging system further comprises a filter installed between the radiation source and an object of interest such that an x-ray flux delivered to a plurality of regions in a field of view is approximately homogeneous.

15. (original) A computer in accordance with Claim 11 further programmed to modulate a radiation source current such that the radiation source current near an edge of the radiation source is greater than the radiation current at a center of the radiation source.

16. (original) A computer in accordance with Claim 11 further programmed to modulate a dwell time of an electron beam emitted from the radiation source such that a dwell time at an X-ray spot near an edge of a field of view is greater than the dwell time at an X-ray spot near the center of the field of view.

17. (original) A computer in accordance with Claim 11 further programmed to modify a sampling distance between a plurality of x-ray spots such that the spots near an edge of the radiation source are spaced closer than the spots near a center of the radiation source.

18. (canceled)

19. (canceled)

20. (canceled)

21. (currently amended) A ~~CT system in accordance with Claim 18,~~ computed tomographic CT imaging system for operating a radiation source, said CT system comprising:

a source;

a detector array; and

a computer coupled to said detector array and said radiation source, said computer configured to operate said radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by said detector array, and wherein said computer is further configured to modulate a radiation source current such that the radiation source current near an edge of said radiation source is greater than the radiation current at a center of said radiation source.

22. (currently amended) A ~~CT system in accordance with Claim 18,~~ computed tomographic CT imaging system for operating a radiation source, said CT system comprising:

a source;

a detector array; and

a computer coupled to said detector array and said radiation source, said computer configured to operate said radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by said detector array, and wherein said computer is further configured to modulate a dwell time of an electron beam emitted from said radiation source such that a dwell time at an X-ray spot near an edge of a field of view is greater than a dwell time at an X-ray spot near the center of the field of view.

23. (currently amended) A ~~CT system in accordance with Claim 18,~~ computed tomographic CT imaging system for operating a radiation source, said CT system comprising:

a source;

a detector array; and

a computer coupled to said detector array and said radiation source, said computer configured to operate said radiation source such that at least one of an inverted-cone beam geometry and a non-inverted cone beam geometry is received by said detector array, and wherein said computer is further configured to modify a sampling distance between a plurality of x-ray spots such that the spots near an edge of said radiation source are spaced closer than the spots near a center of said radiation source.

24. (new) A CT system in accordance with Claim 21, wherein said radiation source comprises at least one of a line radiation source and a two-dimensional radiation source.

25. (new) A CT system in accordance with Claim 21, wherein said CT imaging system further comprises a filter installed between the radiation source and an object of interest such that an x-ray flux delivered to a plurality of regions in a field of view is approximately homogeneous.

26. (new) A CT system in accordance with Claim 22, wherein said radiation source comprises at least one of a line radiation source and a two-dimensional radiation source.

27. (new) A CT system in accordance with Claim 22, wherein said CT imaging system further comprises a filter installed between the radiation source and an object of interest such that an x-ray flux delivered to a plurality of regions in a field of view is approximately homogeneous.

28. (new) A CT system in accordance with Claim 23, wherein said radiation source comprises at least one of a line radiation source and a two-dimensional radiation source.

29. (new) A CT system in accordance with Claim 23, wherein said CT imaging system further comprises a filter installed between the radiation source and an object of interest such that an x-ray flux delivered to a plurality of regions in a field of view is approximately homogeneous.